Hydro Bard

OPERATING AND MAINTENANCE MANUAL

HYDRAULIC BOLT TENSIONERS

HRT · HRT6 · HCK



Read this manual and the safety instructions before use.

Hydro Bard Mühendislik · hydrobard.com

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01 GENERAL SAFETY RULES

- Read this entire manual before using the product. The product must only be used by trained and authorised persons.
- Never exceed the maximum working pressure shown on the rating plate or label. Always monitor the system with a pressure gauge.
- All components in the system (pump, hose, coupler, valve, tool) must be rated for the same or higher pressure.
- Never disconnect, tighten or loosen fittings, couplers or hoses while they are under pressure.
- Pressurised hydraulic oil can penetrate the skin and cause serious injury. Never check for leaks by hand; seek medical help immediately after any oil injection.
- Wear safety glasses, work gloves and safety shoes. Do not stand in the line of movement of pressurised equipment.
- Do not use equipment that is damaged, leaking, deformed or has illegible labels; send it for service.
- Do not use the equipment for any other purpose or modify it. Use genuine spare parts only.

⚠ PRODUCT-SPECIFIC WARNINGS

- Always calculate the required hydraulic pressure from the target preload and the load transfer factor (LTF); never exceed the calculated pressure.
- Never exceed the maximum stroke mark of the piston. Exceeding the stroke limit damages seals and piston.
- The stud must protrude enough above the nut; the puller must engage at least its full thread length on the stud.
- Do not stand in line with the stud axis while pressurised. A failing stud can eject parts.

Warning signs

DANGER	A situation that will result in death or serious injury if not avoided.
WARNING	A situation that could result in injury if not avoided.
CAUTION	A situation that could damage the product or give a wrong result.

02 PRODUCT DESCRIPTION

The HRT, HRT6 and HCK series stretch the stud axially with a hydraulic cylinder without turning it. While the stud is stretched the nut is run down by hand; when pressure is released the target preload stays in the joint. The multi-

stage HCK delivers high force in tight spaces.

03 TECHNICAL DATA

Max. working pressure	1500 bar (21,750 psi)
HRT series	M20–M150, 160–6,400 kN, 11 models
HRT6	M72–M90, 2,500 kN, 6 mm pitch
HCK series	M24–M64, 288–2,244 kN, 12 models
Pressure–force values	Datasheet and the HRT pressure–force tables page

04 PREPARATION AND CONNECTION

1. Clean the stud and nut threads and check for burrs and damage. Lightly lubricate the threads and bearing faces.
2. Place the bridge for the stud size over the nut so that the nut-turning window is accessible.
3. Seat the tensioner on the bridge and screw the puller onto the stud by hand until it contacts the cylinder.
4. Check that the piston is at zero stroke (fully retracted). Back off the puller slightly to set the gap if needed.
5. When using several tools, connect the hoses in series and check that every coupler is fully engaged. Use 1500 bar hoses and pump.

05 OPERATION

1. Raise the pressure slowly to the calculated value while watching the gauge.
2. At the target pressure, run the nut down firmly onto the joint face through the bridge window using the tommy bar.
3. Release the pressure slowly; the load transfers from the tool to the nut.
4. If needed, make a second pass to recover load loss: re-apply the pressure and re-seat the nut.
5. With the pressure fully at zero, unscrew the puller and remove the tool and bridge.
6. Before the next tensioning push the piston fully back (spring-return models retract by themselves).

06 MAINTENANCE AND PERIODIC CHECKS

Check	Interval
Piston stroke limit and body damage	Before each use
Couplers, hoses and gauge	Before each use
Clean the puller and bridge threads	After each use
Seal check and pressure test	Yearly
Gauge calibration	Yearly

07 TROUBLESHOOTING

Symptom	Possible cause	Remedy
Pressure does not rise	Coupler not fully connected; low pump oil; valve open	Tighten couplers; top up oil; close the valve
Pressure drops	Seal leak; connection leak	Stop, release pressure; send for service
Piston reaches stroke limit	More stud stretch than expected; wrong initial gap	Release pressure, seat the nut and make a second pass; check the calculation
Puller will not unscrew	Pressure not fully released; thread damage	Release all pressure; do not force, check the threads

08 STORAGE, TRANSPORT AND DISPOSAL

- Store the equipment clean, dry and depressurised, with dust caps fitted to the couplers.
- Do not lift or carry the equipment by its hoses or couplers; use suitable lifting gear for heavy parts.
- Dispose of used hydraulic oil and oily materials in line with local environmental regulations.

09 SERVICE AND CONTACT

Contact Hydro Bard for maintenance, repair, pressure testing and spare parts. Quote the model code and serial number of any product sent for service.

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PRODUCT PAGE
hydrobard.com/en/bolt-tensioning.html

Keep this manual with the product and accessible to the user. For technical values see the product datasheet and the rating plate. · Rev. 1.0 · October 2026